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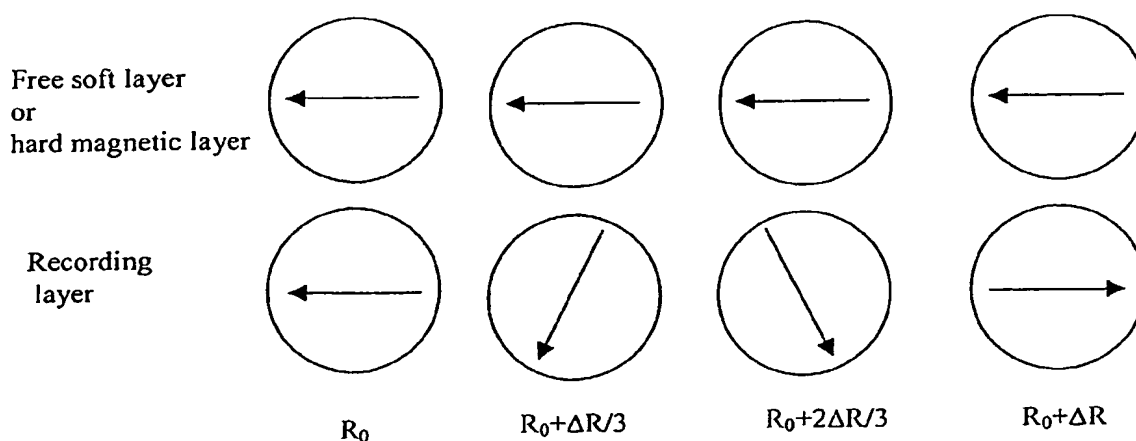
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(54) Title: MULTI-STAGE PER CELL MAGNETORESISTIVE RANDOM ACCESS MEMORY



(57) Abstract: A multi-state magnetoresistive random access memory unit (MRAM) having a plurality of memory cells, each of the cells are written to and read from, independently of other cells. The plurality of memory cells comprises a recording layer as a pinned magnetic layer and a read layer as an unpinned layer. The unpinned layer has a higher Curie point than the pinned layer. The pinned layer in an individual cell is heated to near its Curie point and a bit line current and a word line current is used to align the magnetization vector of the recording layer at a plurality of angles relative to the magnetization vector of the read layer.



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